

Lower gastrointestinal bleeding due to rectal Dieulafoy's lesion

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Abstract

Dieulafoy's lesion is a relatively rare but serious cause of gastrointestinal bleeding. It usually involves the upper gastrointestinal tract. However, it has recently been reported in different regions of the gastrointestinal tract, including the rectum. Here, we report the case of a female patient who presented with fresh bleeding per rectum for 1 day with low hemoglobin level. Colonoscopy revealed an actively bleeding rectal Dieulafoy's lesion which was successfully treated with a clip. To our knowledge, there have been few reported cases of lower gastrointestinal bleeding caused by Dieulafoy's lesion in the rectum.

Keywords

Dieulafoy's lesion, lower gastrointestinal bleeding, colonoscopy

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Introduction

Dieulafoy's lesion (DL) represents an uncommon but well-recognized source of significant gastrointestinal bleeding.¹ DL accounts for 5% of all causes of acute gastrointestinal bleeding.² DL is a dilated, aberrant submucosal artery that protrudes and spontaneously bleeds from a small mucosal defect.³ It is widely described involving the stomach, but it is infrequent rectum finding. First described in 1991 by Franko et al. and since then, only few cases have been described in the literature.⁴ Patients usually present with massive gastrointestinal hemorrhage secondary to rupture of these relatively large submucosal vessels. Mortality can range anywhere from 8.6% to 17%.⁵ Endoscopy is the preferred diagnostic modality. However, because of the small size of the lesion and the intermittent bleeding pattern, locating the lesion can be difficult and repeated endoscopic evaluations are often needed.⁶ DL can be successfully treated with endoscopic hemostasis, whereas surgery or selective arterial embolization are alternative therapeutic approaches for cases with intractable bleeding or unsuccessful endoscopic therapy.¹

Case report

A 53-year-old Hispanic female with a past medical history significant for hypertension and diabetes mellitus presented with six episodes of bright red blood per rectum mixed with

bowel movements for 1 day. She denied nausea, vomiting, or abdominal pain. There was no history of non-steroidal anti-inflammatory drug (NSAID), anti-platelet or anti-coagulant drugs use. She has no history of gastrointestinal system bleeding, never had a colonoscopy with no family history of gastrointestinal cancer. On physical examination, she was pale, but not in severe distress. Her blood pressure was 106/50 mmHg, heart rate was 104 beats per minute, temperature was 35.8°C, and body mass index (BMI) was 36.6. She was alert, oriented, and her abdomen was soft, non-tender, and not distended with normal bowel sounds. Bright fresh blood was seen in the rectal examination. Laboratory tests on admission revealed hemoglobin of 8.3 g/dL, platelets of $204 \times 10^3/\mu\text{L}$, blood urea nitrogen (BUN) of 36.9 mg/dL, and creatinine of 1.4 mg/dL. Her liver function test and coagulation panel were unremarkable. Intravenous normal saline fluid was given in the emergency room, and patient was transferred to the intensive care unit for close monitoring. Although she had bright red bleeding per rectum, but due to

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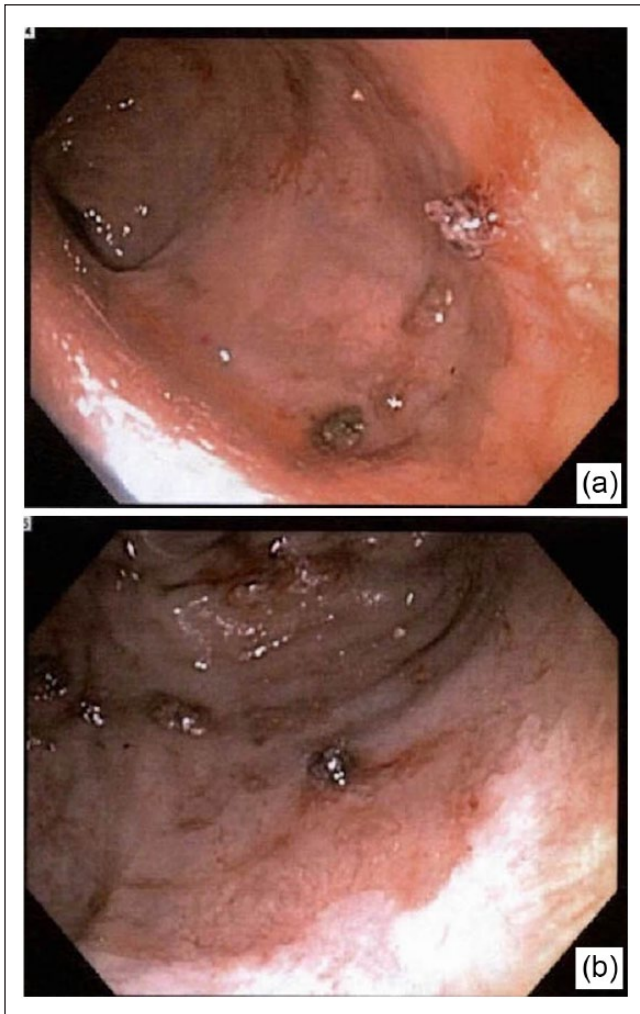


Figure 1. A single Dieulafoy's lesion in the rectum which was spurting blood.

her high BUN/creatinine ratio, we elected to place her on pantoprazole and octreotide drips to cover any possible upper gastrointestinal source of bleeding. There were no further episodes of rectal bleeding. However, her hemoglobin had dropped to 6.8 g/dL on repeated measurement 6 h later. Two units of packed red blood cells were transfused, which raised her hemoglobin level to 8.5 g/dL. Gastroenterology team was consulted and subsequently performed esophagogastroduodenoscopy (EGD). The EGD showed non-erosive gastritis located in the body of stomach with no signs of active bleeding. Therefore, the pantoprazole and octreotide drips were stopped, and the patient was bowel prepared for colonoscopy, which was done next day. The colonoscopy revealed the presence of an actively bleeding DL in the rectum (Figure 1). An endoclip was placed on the lesion and excellent hemostasis was obtained. The patient did not have any more bleeding per rectum after the clipping, and no more blood transfusions were needed. She was discharged home with a prescription of iron supplement. At 1-month follow-up visit, she did not have any recurrence of bleeding with improving hemoglobin level.

Discussion

DL is an uncommon lesion that usually presents with massive bleeding. It is a dilated, aberrant submucosal vessel that erodes the overlying epithelium and bleeds spontaneously in the absence of a primary ulcer.⁷ It is most commonly located in the upper gastrointestinal tract; however, lesions were found beyond the upper gastrointestinal tract in only 13% of cases.² This percentage may represent an underestimation of the problem due to several factors such as availability and timing of endoscopy, lesion with overlying clot, familiarity with lesion, and quality of bowel preparation during endoscopy.² Middle-aged men are more commonly affected, with a median age of 52 years at presentation.⁶ Chronic renal failure and hypertension, as well as major burns, have been associated with the formation of DL.³ Patients usually present with painless bleeding per rectum, most often requiring blood transfusion.³ Endoscopic management is the mainstay for both diagnosis and treatment and is effective in 80%–100% of cases.⁵ Although endoscopy is usually successful in identifying these lesions, repeat examinations may be necessary as a result of the intermittent nature of bleeding that characterizes these lesions.⁵ The endoscopic diagnosis depends on: the presence of an arterial vessel actively bleeding through normal surrounding mucosa; visualization of a vessel protruding from a minute mucosal defect or protruding from normal-appearing mucosa, with or without active bleeding; or a fresh clot with a narrow point of attachment adhering either to a minute mucosal defect or to normal-appearing mucosa.^{8,9} There is currently no consensus on the optimal endoscopic therapy of rectal DL. The hemostatic effectiveness of both endoscopic clipping and band ligation was demonstrated.^{6,10} Failure of endoscopic treatment warrants an angiographic or surgical approach.⁵

Conclusion

DL is infrequent cause of lower gastrointestinal bleeding in comparison to diverticulosis and angiodysplasia. However, it should be considered in the differential diagnosis of painless rectal bleeding, especially when no other sources are found. Endoscopy is very useful and effective in diagnosing and treating bleeding rectal DL.

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Declaration of conflicting interests

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Ethical approval

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Informed consent

Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

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